

**ESTIMATION OF FLUORIDE AND SOME ALKALINE EARTH METAL ION LEVELS IN  
THE DRINKING WATERS IN RURAL AREAS OF CHICKBALLAPUR TALUKE  
(KARNATAKA)**

**SREENIVASA K, CHANDRASHEKARA K N & B NARASIMHA MURTHY**

Department of Chemistry, SJC Institute of Technology, Chickballapur, Karnataka, India

**ABSTRACT**

Fluorine is one of the most common elements in the Earth's crust. Fluoride is recognized to be the most effective caries-preventive agent. The main sources of fluoride for people are generally food and drinking water. For this reason, the fluoride and also the metal ion (Ca, K, Mg, Na,) concentrations in the drinking waters collected from the rural areas of chickballapur taluke and its counties were investigated. In the determination of fluoride and of Na and K, an ion-meter with a combination-fluoride electrode and a flame photometer were used, respectively. According to the results obtained, the metal ion concentrations in the drinking waters in the studied area are within the safe drinking water regulation limits (TS 266) and also the fluoride levels (as mean  $0.17 \text{ mg L}^{-1}$ ) are lower than the permissible limit for fluoride ( $0.8-1.7 \text{ mg L}^{-1}$ ).

**KEYWORDS:** Fluoride, Metal Ions, Drinking Water, Pre Concentration